

February 13, 2003

D.T.E. 02-40-A

Investigation by the Department of Telecommunications and Energy on its own Motion into the Provision of Default Service.

I. INTRODUCTION

On June 21, 2002, the Department opened this investigation into all aspects of the manner in which default service is provided to ensure that it is compatible with the development of an efficient competitive market and to ensure that the benefits of a competitive market are available to all Massachusetts consumers at the end of the standard offer service transition period. Procurement of Default Service, D.T.E. 02-40, at 1 (2002). This matter was docketed as D.T.E. 02-40. Although the investigation covered a broad number of issues related to the provision of default service, this Order addresses only the effects of congestion costs and locational marginal pricing (“LMP”). Additional issues will be addressed in subsequent Orders.¹

On July 23, 2002, the Department held a technical session to discuss the issues raised in D.T.E. 02-40. Initial and reply comments were submitted by the Attorney General of the Commonwealth of Massachusetts (“Attorney General”); the Commonwealth of Massachusetts Division of Energy of Energy Resources (“DOER”); Massachusetts Electric Company and Nantucket Electric Company (together, “MECo”); Boston Edison Company (“BEC”), Cambridge Electric Light Company (“Cambridge”), and Commonwealth Electric Company (“Commonwealth”), (together “NSTAR”); Western Massachusetts Electric Company

¹ Issues to be addressed in subsequent Orders include the cost components to be included in the calculation of default service rates, and default service pricing options and procurement strategies. In addition, the Department stated that we would use this proceeding to investigate the appropriate role of distribution companies in moving their customers toward competitive supply, including whether distribution companies should continue to serve as the default service providers, or whether this function can and should be provided by other entities. D.T.E. 02-40 at 5-6.

(“WMECo”); Fitchburg Gas and Electric Light Company (“Fitchburg”); Bay State Consultants (“Bay State”); Centrica North America (“Centrica”); Competitive Energy Services - Massachusetts (“CES”); Competitive Retail Suppliers (“Competitive Suppliers”); Competitive Power Coalition (“CPC”); Constellation Power Source, Inc., (“Constellation”); Dominion Retail, Inc., (“Dominion”); Duke Energy Trading and Marketing (“Duke”); National Energy Marketers Association (“NEM”); PG&E National Energy Group (“PG&E”); TransCanada Power Marketing, Ltd. (“Trans Canada”); TXU Energy Retail Company (“TXU”); Associated Industries of Massachusetts (“AIM”); Cape Light Compact; the Energy Consortium (“TEC”); Massachusetts Community Action Program Directors Association, Inc. (“MASSCAP”); City of Newton Public Buildings Department; the Western Massachusetts Industrial Customers Group (“WMICG”); Union of Concerned Scientists, Massachusetts Energy Consumers Alliance, Massachusetts Public Interest Research Group, Clean Water Action, Conservation Law Foundation, and the Environmental League of Massachusetts (jointly, “UCS”); Massachusetts Technology Collaborative (“MTC”); Northeast Energy Efficiency Council; and ISO New England (“ISO-NE”).

III. CONGESTION COSTS / LOCATIONAL MARGINAL PRICING

A. Introduction

Each distribution company currently procures default service supply for each of its customer classes on a service territory-wide basis, and establishes a single default service price for each customer class. The default service price that a customer in a particular class pays is not dependent upon the location of the customer within the distribution company’s service

territory. This is consistent with the manner in which ISO-NE currently administers the wholesale electricity market. Currently, ISO-NE implements a single spot market for the New England region and calculates a single hourly energy clearing price for the entire region. Under the current wholesale market design, the location of a customer within a distribution company's service territory does not affect the cost of providing generation service (including default service) to the customer.

However, starting March 1, 2003, ISO-NE will implement a transmission congestion management system ("CMS") in the wholesale market that is intended to send location-based price signals to generation owners, electricity consumers, and other participants in the market regarding the underlying cost and value of electricity in different subregions of New England. Under CMS, the New England region will be divided into eight "load zones" and hundreds of nodes. For each node, ISO-NE will implement a separate wholesale spot market and will calculate a separate hourly energy clearing price, or LMP. For those hours when there are no transmission constraints within the region, the hourly LMPs will be the same at each node.² However, for any hour in which there are transmission constraints within the region, LMPs will vary by node, based on the bid price of the marginal generating unit dispatched at that node by ISO-NE during the hour.³ Hourly LMPs for each load zone are then calculated based

² This discussion does not take into account node-specific line losses that may cause LMPs to vary by node, even in the absence of transmission constraints.

³ ISO-NE performs a security-constrained, economic dispatch of generating units based on bids submitted by the units' owners. The hourly LMP in each zone will be equal to the price at which generation supply and electric demand clear in each hour.

on the average of the nodal prices within each zone. CMS in New England is called a “zonal-nodal” system because the price paid to generation resources is based on the resources’ nodal locations, while the price paid by load (i.e., consumers) is based on zonal location. To the extent that the ISO dispatches high-cost generation units at nodes within a zone because of transmission constraints, the hourly LMP for that zone will be higher than the LMP in non-constrained zones. The difference between the LMPs in different zones indicates the transmission congestion costs that are incurred.

Three of the eight load zones will be located in Massachusetts -- the Northeast Massachusetts (“NEMA”) zone, the Southeast Massachusetts zone (“SEMA”), and the West-Central Massachusetts zone. Cambridge’s, Commonwealth’s, Fitchburg’s, and WMECo’s service territories are located entirely within a single zone. BECo’s service territory is located within two zones, the NEMA and SEMA zones, and MECo’s service territory is located in all three zones. With the introduction of CMS, the location of a customer within BECo’s and MECo’s service territories will affect the cost of providing generation service to the customer.

B. Summary of Comments

The Department requested comments on whether, in future default service solicitations, MECo and NSTAR should procure default service supply separately, and establish different default service prices for each of the load zones in which their service territories are located.⁴

⁴ MECo’s recently-completed default service supply solicitation procured supply through April 2003, while NSTAR’s most recent solicitation procured supply through
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Comments on this issue can be generally summarized as follows: (1) default service prices should be zone-specific for all customer classes, (2) default service prices should be zone-specific for large and medium C&I customers, but should be averaged across zones for small C&I and residential customers, and (3) default service prices should be averaged across zones for each customer class.

Bay State Consultants, Cape Light Compact, ISO-NE, and WMICG argue that default service prices for all customers should be differentiated by load zone, in order to fully account for differences in congestion costs (Bay State Consultants Comments at 1-2; Cape Light Compact Reply Comments at 12; ISO-NE Reply Comments at 4-6; WMICG Comments at 4). These commenters state that establishing an average default service price across zones would harm the development of a competitive market and would result in customers in low-congestion zones paying a subsidy to customers in higher-congestion zones (Bay State Consultants Comments at 1-2; Cape Light Compact Reply Comments at 12; WMICG Comments at 4). ISO-NE adds that establishing zone-differentiated default service prices for all customers will ensure that customers accurately see the costs of electricity service, thus providing these customers with the appropriate incentives to undertake demand side management measures (ISO-NE Reply Comments at 4-6).

While the Competitive Suppliers, DOER, and MECo agree that zone-differentiated default service prices should be established for medium and large C&I customers, they do not

⁴(...continued)
July 2003.

recommend this same approach for residential and small C&I customers for whom a robust competitive retail market has not yet developed (DOER Comments at 34-35; Competitive Suppliers Comments at 6, n.2; MECo Comments at 34-35). For medium and large C&I customers, these commenters support zone-differentiated default service prices in order to avoid distorting the competitive market (DOER Comments at 34-35; Competitive Suppliers Comments at 6, n.2; MECo Comments at 34-35). DOER and MECo argue that, if default service prices for these customers were averaged across zones, customers in high-congestion zones would have an inappropriate incentive to migrate to default service (DOER Comments at 34-35; MECo Comments at 34-35). DOER adds that larger customers have or can obtain metering technologies to allow them to respond to the price signals sent by zone-differentiated prices (DOER Comments at 34-35).

Conversely, DOER, MECo, and Dominion recommend that default service prices for residential and small C&I customers be averaged across load zones, because of the lack of competitive options available to these customers (DOER Comments at 34-35; Dominion Comments at 3-4; MECo Comments at 34-35).⁵ The Competitive Suppliers and Dominion add that the use of zone-differentiated default service pricing for smaller customers could introduce an added level of confusion and dissatisfaction that would impede the development of a competitive market for these customers (Competitive Suppliers Comments, at 6, n.2; Dominion Comments at 3). If the Department adopts average prices for smaller customers,

⁵ The Competitive Suppliers state that it may be appropriate to establish average default service prices for residential and small C&I customers, but not did explicitly support such an approach (Competitive Suppliers Comments, at 6, n.2).

DOER states that the Department should revisit this policy toward the end of the standard offer service transition period to evaluate the state of the competitive market for these customers (DOER Comments at 35).

Finally, NSTAR and the Attorney General argue that, until more experience with LMP is gained, default service prices should be averaged across load zones for all customers (NSTAR Reply Comments at 25-27; Attorney General Reply Comments at 8). NSTAR and the Attorney General state that establishing zone-differentiated prices now would cause customer confusion and could lead to customer dissatisfaction with electric restructuring (Attorney General Reply Comments at 8; NSTAR Reply Comments at 25-27). NSTAR states that default service prices should not be zone-differentiated for residential and small C&I customers “at least until the end of the standard offer [service transition] period, if ever” (NSTAR Reply Comments at 25-27).

NSTAR recognizes that it may be appropriate to establish zone-differentiated prices for medium and large C&I customers, but contends that accommodating such prices will require significant changes to its billing and information systems (id.). NSTAR recommends that the Department monitor the evolution of LMP for at least a twelve-month period before requiring distribution companies to invest the considerable time and resources necessary to make the changes and to allow for essential customer education (id.). NSTAR adds that experience may reveal that the difference in congestion costs among zones is so minimal as to not warrant zone-differentiated default service prices for these larger customers (id.).

C. Analysis and Findings

The purpose of this proceeding is to investigate whether the way default service as now provided promotes the efficient working of a competitive market. Up to now, that is before CMS takes effect, setting a single default service price within a distribution company's service territory for each customer class has had no adverse effect on the competitive market because the location of a customer within a service territory did not affect the cost of providing generation service to the customer. CMS's overlay of differentially priced zones onto Massachusetts changes the situation. Now there is the potential -- even likelihood -- for geographic price differential and, hence, for differential in the cost of serving customers related to a customer's location. The NEMA zone has for some time been a transmission constrained area. During certain hours, the NEMA zone may continue to experience transmission constraints. During these hours, the LMPs in NEMA likely will be higher than those in the other Massachusetts load zones. As such, competitive suppliers may find it more expensive to provide generation service to customers in NEMA than in the other zones. In principle, default service prices should not be artificially exempt from internalizing the same zone differentials that competitive supply must account for in attracting customers. Therefore, distribution companies should procure default service supply separately for each load zone and establish separate default service prices for each zone, to ensure that the default service prices include the same level of congestion cost impact that competitive suppliers are likely to include in their service offerings. That is, in order to avoid introducing distortions into the competitive market, default service prices in each load zone should include the same level of

congestion costs that suppliers serving load in that zone would incur. Zone-differentiated default service prices would avoid one form of distortion in the market, and competitive suppliers would stand on better footing to serve customers in all zones than they would otherwise. Averaging LMPs to determine a single service territory-wide default service rate could skew the market, thereby impeding the development of competition.⁶

For medium and large C&I customers, for which an active competitive market has already developed,⁷ default service rates should, wherever practicable and as soon as practicable, be set in a manner that does not undermine this competition. Therefore, for medium and large C&I customers,⁸ the Department directs BECo and MECo, for their next

⁶ With one service territory-wide rate, default service customers located in constrained zones, where high congestion exists, would pay a price lower than could be offered by the competitive market. Default service customers located in unconstrained zones, where relatively less congestion exists, would pay a price higher than would be competitively determined. Competitive suppliers would likely target customers in low congestion zones by offering a competitive price that is lower than the default service rate. Conversely, suppliers may be discouraged from marketing to customers located in constrained zones, because the competitive price they could offer these customers would include congestion costs that are higher than those included in the average default service prices. Over the long run, competitive suppliers may tend to sign up customers in the non-constrained zones, leaving customers from constrained zones more likely to rely on default service for want of attractive competitive options.

⁷ During December 2002, the competitive market supplied approximately 46 percent of the electricity consumed by large C&I customers, as compared to eleven percent supplied through default service. For medium C&I customers, the competitive market supplied approximately 17 percent of the electricity consumed, as compared to 21 percent supplied by default service (see DOER Website, <http://www.mass.gov/doer>).

⁸ By medium and large C&I customers, the Department means customers receiving service under the G-2 and G-3 rate classes for MECo, and the G-2, G-3 and T-2 rate
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solicitations and contracts for default service, to procure default service supply on a zone-specific basis. BECo and MECo are also to establish zone-differentiated default service prices.⁹ This will ensure that competitive suppliers have a fair opportunity to serve BECo's and MECo's customers in all zones.

However, for residential and small C&I customers for whom there are currently few competitive options, it is appropriate to treat LMP differently. Although the Department remains fully committed to taking reasonable actions that remove barriers to competition for all customer classes, zone-differentiated default service rates would have little effect at this time

⁸(...continued)

classes for BECo. As the precise definition of larger C&I customers was not fully developed in this record, we are receptive to hearing from the companies as to the appropriateness of these rate class categories for this billing purpose.

⁹ As noted above, NSTAR states that implementing zone-differentiated default service prices will necessitate the expenditure of considerable time and resources. If either NSTAR or MECo is unable to implement zone-differentiated prices on the schedule directed, that company should notify the Department and submit a description of the impediments to compliance and a proposed schedule for when such pricing can be implemented. MECo's indicates no expected problems, but actual implementation may disclose something unanticipated (MECo Initial Comments at 34-35). BECo indicates potential billing system problems, not raised by MECo (BECo Reply Comments at 25-27). Moreover, BECo indicates only seven percent of its "customers" lie in the SEMA zone (*id.* at 26, n.18). The "larger C&I customer" as defined in n.8, above, will be a subset of that seven percent. How many large C&I BECo customers lie in SEMA cannot be established on this record. Whether the number of BECo C&I customers is of a size that will give rise to cost-effectiveness questions (*i.e.*, whether the value of sending a zonal price signal to a small number of larger C&I BECo customers in SEMA warrants the cost of reordering the company's billing system) is suggested by BECo's comment that LMP may be relevant "only to a de minimis segment" of its customer base (BECo Reply Comments at 26, n.18). We presently lack the information to do any more than note the potential and indicate a willingness to hear more on this topic, if there is a problem.

on the development of a competitive market for smaller customer classes. The introduction of zone-differentiated rates for residential and small C&I customers has potential for customer confusion, especially given the uncertainty as to what the magnitude of zonal price differences will be. Therefore, after taking into account the relative costs and benefits of establishing zone-differentiated default service prices, the Department directs BECo and MECo to establish a service territory-wide default service rate for the residential and small C&I customer classes, averaged across load zones. The Department intends to revisit this issue after experience is gained regarding CMS, in particular the differences that may arise in congestion costs among the various zones, and the development of competition for these customer classes. To assist the Department in evaluating the differences in procurement costs among the zones, we direct BECo and MECo to procure default service supply for the residential and small C&I customer classes on a zone-specific basis.¹⁰

¹⁰ The distribution companies shall continue to procure default service supply on a customer-class basis. See D.T.E. 99-60-B at 12-14.

VII. ORDER

Accordingly, it is hereby

ORDERED: That all electric distribution companies comply with the directives contained herein.

By Order of the Department,

Paul B. Vasington, Chairman

James Connelly, Commissioner

W. Robert Keating, Commissioner

Eugene J. Sullivan, Jr., Commissioner

Deirdre K. Manning, Commissioner